

**REMARKS**

Claims 11 and 12 are currently being amended to obviate the Examiner's objection and indefiniteness rejection. Additionally, claim 9 has been amended to depend from claim 8, and claim 13 has been amended to depend from claim 11.

Further, claims 1-3, 5-8, 10-12, and 14-15 are currently being amended to conform the claims to U.S. practice. Accordingly, Applicant asserts no subject matter has been relinquished by these amendments. Moreover, these amendments do not introduce new matter within the meaning of 35 U.S.C. §132

**1. Claim Objections**

The Office Action states,

Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 12, drawn to a product being either a 'film, fiber or molding' cannot properly depend from a method claim. The recitation therein of 'comprising a propylene polymer composition as claimed in claim 10' is erroneous since claim 10 is not a composition claim.

**RESPONSE**

Applicant respectfully traverses the objection raised to claim 12. In particular, the Office Action states on page 2, lines 6-9, Claim 12, drawn to a product being either a 'film, fiber or molding' cannot properly depend from **a method claim**. The recitation therein of 'comprising a propylene polymer composition as claimed in claim 10' is erroneous **since claim 10 is not a composition claim**. (Emphasis added)

However, claim 10 is a "composition" claim insomuch that claim 10 is a product-by-process claim. In fact claim 10 recites,

**A propylene polymer composition** obtained by an at least two-stage process, wherein, in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, comprising at least 85% by weight of propylene, is prepared by polymerization, and in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes, are polymerized to give an ethylene polymer comprising at least 90% by weight of ethylene, **wherein the amount of the ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight, and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg.** (Emphasis added)

Accordingly, for this reason alone, Applicant respectfully believes the current objection should be withdrawn.

Notwithstanding, Applicant has amended claim 12 to remove the dependency on claim 10. Accordingly, Applicant respectfully requests the Examiner to withdraw the current objection.

**2. Rejection of Claims 1-11 and 13-15 Under 35 U.S.C. 112, 2<sup>nd</sup>**

**Paragraph**

The Office Action states,

Claims 1-11 and 13-15 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP §2172.01. The omitted steps are:

Claim 1 recites in the preamble '(a) process for preparing propylene polymer compositions in an at least two-stage process.' This is not clear that any one composition is being made since there is nothing to indicate any mixing or interpolymerization, such as would be expected from reactors in sequence or parallel. The only requirements recited are compositional, in nature, and the recitations of claims 1-7 are drawn to a process. In claims 8, 9, 13, 14 and 15, the recitation in the section prior to the addition of the third component are likewise vague since there is nothing to provide a single product. Claim 10, applicants recite essentially a product-by-process but, as pointed out above, fail to provide sufficient guidance to produce. Claim 11, drawn to a process for "producing films, fibers or moldings" does not provide any steps drawn to making any of a fiber, film or molding.

**RESPONSE**

Applicant respectfully traverses the rejection of claims 1-11 and 13-15.

First and foremost, the Examiner's focus during examination of claims for compliance with the requirement for definiteness under 35 U.S.C. §112, second paragraph, is whether the claim meets the threshold requirements of clarity and precision, and not whether more suitable language or modes of expression are available. Accordingly, the Examiner should allow claims that define the patentable subject matter with a reasonable degree of particularity

and distinctness.

Additionally, definiteness of claim language must be analyzed, not in a vacuum, but in light of:

- (A) The content of the particular application disclosure;
- (B) The teachings of the prior art; and
- (C) The claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. See MPEP §2173.02.

Further, the requirement to "distinctly" claim means that the claim must have a meaning discernible to one of ordinary skill in the art when construed according to correct principles. . . .Only when a claim remains insolubly ambiguous without a discernible meaning after all reasonable attempts at construction must a court declare it indefinite. *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1366, 71 USPQ2d 1081, 1089 (Fed. Cir. 2004).

With respect to the instant rejection, the current Office Action states,

Claim 1 recites in the preamble '(a) process for preparing propylene polymer compositions in an at least two-stage process.' This is not clear that any one composition is being made since there is nothing to indicate any mixing or interpolymerization, such as would be expected from reactors in sequence or parallel. The only requirements recited are compositional, in nature, and the recitations of claims 1-7 are drawn to a process.

However, it is not essential to a patentable combination that

there be interdependency between the elements of the claimed device, or that all the elements operate concurrently toward the desired result. *Ex parte Nolden*, 149 USPQ 378, 380 (Bd. Pat. App. 1965). See MPEP §2172.01.

Additionally, Applicant respectfully traverses the Examiner's contention that it "is not clear that any one composition is being made". In particular, claim 1 recites,

A process for preparing **propylene polymer compositions** in an at least two-stage process, wherein, in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, comprising at least 85% by weight of propylene, is prepared by polymerization, and in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes, are polymerized to give an ethylene polymer comprising at least 90% by weight of ethylene, wherein the amount of the ethylene polymer **in the propylene polymer composition** ranges from 10 to 50% by weight **and the propylene polymer composition** comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg. (Emphasis added)

Accordingly, given the clear and plain language of claim 1, Applicant is currently claiming a process for producing propylene polymer compositions, wherein the propylene polymer compositions comprise a propylene homopolymer or copolymer, and an ethylene polymer, with the propylene polymer compositions comprising from 10 to 50% by weight of the ethylene polymer, and the propylene polymer compositions comprising a melt flow rate of from 2 to 50 g/10 min. according to ISO 1133 at 230°C and 2.16 kg. Additionally, Applicant respectfully believes one having ordinary skill in the art would

appreciate the metes and bounds of claim 1, as well as all the claims that depend from claim 1. As such, Applicant respectfully requests the Examiner to withdraw the current rejection.

With respect to claims 8, 14, and 15, Applicant's arguments *supra* regarding claim 1 are incorporated herein by reference in their entirety. Accordingly, as with claim 1, Applicant respectfully believes one having ordinary skill in the art would appreciate the metes and bounds of claims 8, 14, and 15.

Additionally, claim 9 has been amended to depend from claim 8, and claim 13 has been amended to depend from claim 11. Accordingly, Applicant respectfully believes one having ordinary skill in the art would appreciate the metes and bounds of claims 9 and 13.

With respect to claim 11, Applicant has amended claim 11 to obviate the current rejection. Accordingly, Applicant respectfully requests the Examiner to withdraw the current rejection.

In light of the above, Applicant respectfully believes claims 1-15 comply with 35 U.S.C. 112, 2<sup>nd</sup> paragraph, and that one having ordinary skill in the art would appreciate the metes and bounds thereof.

### **3. Rejection of Claims 1-5 and 10-12 Under 35 U.S.C. §102(e)**

The Office Action states,

Claims 1-5 and 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Dahn et al (US 7,196,140), newly cited.

The applied reference has a common assignee with the

instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application as is thus not the invention 'by another,' or by an appropriate showing under 37 CFR 1.131.

The reference teaches a method, as recited in the patent, that requires the same constituents and employ a two-stage process, wherein the first stage may produce a homopolymer of propylene.

### RESPONSE

Applicant respectfully traverses the current rejection.

First and foremost, Applicant respectfully traverses the current rejection to U.S. Patent 7,196,140 (referred to herein as "Dahn, et al.") in which the current rejection is based on 35 U.S.C. §102(e). In order to satisfy 35 U.S.C. §102(e), the following must be met,

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an **international application** filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States **only if** the international application **designated the United States** and was **published under Article 21(2) of such treaty in the English language;** (Emphasis added).

In particular, Dahn, et al. entered the U.S. national phase

from International Application PCT/EP01/05911, which was published as WO 01/90208 on November 29, 2001. Accordingly, for Dahn, et al. to satisfy the requirements of 35 U.S.C. §102(e), Dahn, et al. needed to designate the United States, and be published under Article 21(2) in English. Although Dahn, et al. does satisfy the first requirement of 35 U.S.C. §102(e) by designating the U.S., Dahn, et al. was published under Article 21(2) in German, not in English. See WO 01/90208.

Accordingly, Applicant respectfully believes Dahn, et al. does not have a 35 U.S.C. §102(e) date. See MPEP §706.02(f)(1), Example 5.

Notwithstanding, in an attempt to obviate any possible rejection under 35 U.S.C. §102(a), with respect to WO 01/90208, Applicant has submitted declarations from all 5 co-inventors with this response. See MPEP §716.10.

In light of the above, Applicant kindly requests the Examiner to withdrawal this rejection.

#### **4. Rejection of Claims 1-15 Under 35 U.S.C. 103(a)**

The Office Action states,

Claims 1-15 are rejected under 35 U.S.C. 103(a) as obvious over Cecchin et al (WO 01/19915), newly cited.

The reference to Cecchin et al teaches the manufacture of a polyolefin blend composition produced in a multistage process wherein the first polymer may be a homopolymer of propylene and the second polymer may be an ethylene/alpha olefin (claim 3). Note the Abstract wherein the first stage polypropylene has a melt flow index as recited in



claim 2. Further, note page 1 (lines 19 et seq.) for the process as shown in claims 1, 2, 3 and 6. The reaction conditions of gas phase (claim 4), temperature and pressure (claim 5) are shown at page 7 (line 21 et seq.). Note page 13 for the production of articles. At page 4 (lines 22 et seq.) where the use of multiple stages, i.e. 'at least three polymerization steps' is contemplated, which at least renders obvious the recitations of claims 7, 8, 14 and 15.

The reference fails to show the specific MFR of the polymer blend, yet the range recited is common for this type of polymer blend. Further, any manipulation thereof, which is not shown by the claims, would have been within the skill of an artisan with an eye towards end-use. As such, the skilled artisan would have a high level of expectation of success following the teachings of the reference.

#### **RESPONSE**

Applicant respectfully traverses the rejection of claims 1-15.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when

combined) must teach or suggest all the claim limitations. See MPEP §2142.

With respect to the current rejection, Applicant respectfully believes WO 01/19915 (herein referred to as "Cecchin, et al.") fails to disclose, teach, or suggest, "A process for preparing propylene polymer compositions in an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, comprising at least 85% by weight of propylene, is prepared by polymerization, and in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an ethylene polymer comprising at least 90% by weight of ethylene,

wherein the amount of the ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg."

Additionally, Applicant respectfully believes Cecchin, et al. fails to disclose, teach, or suggest, "A propylene polymer composition obtained by an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, comprising at least 85% by weight of propylene, is prepared by polymerization, and

in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an ethylene polymer comprising at least 90% by weight of ethylene,

wherein the amount of the ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg."

In particular, Applicant respectfully believes Cecchin, et al. fails to disclose, teach, or suggest Applicant's currently claimed process for preparing Applicant's currently claimed propylene polymer compositions in an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, containing at least 85% by weight of propylene, is prepared by polymerization, and

in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an **ethylene polymer comprising at least 90% by weight of ethylene,**

wherein the amount of the **ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight** and the **propylene polymer composition has a melt flow rate, MFR, from 2 to 50 g/10 min.** in accordance with ISO 1133 at 230°C and 2.16 kg.

First and foremost, Applicant respectfully notes the Examiner acknowledges on page 5, line 18 of the current Office Action,

The reference fails to show the specific MFR of the polymer blend. . . .

The Examiner then tries to bridge this acknowledged gap by stating on page 5, line 18 - page 5, line 19,

. . . yet the range recited is common for this type of polymer blend.

However, the Examiner has not offered any *objective, factual evidence* to support such a blanket statement (i.e., "the [MFR] range recited is common for this type of polymer blend). Obviousness is a question of law based on underlying factual inquiries. See MPEP §2141. Accordingly, if the current rejection is maintained, Applicant respectfully requests the Examiner to provide objective, factual evidence supporting the Examiner's aforementioned blanket statement.

Additionally, the Examiner asserts on page 5, line 19 - page 6, line 2, of the current Office Action,

Further, any manipulation thereof, which is not shown by the claims, would have been within the skill of an artisan with an eye towards end-use. As such, the skilled artisan would have a high level of expectation of success following the teachings of the reference.

However, Applicant respectfully believes the Examiner has not enumerated *why* one skilled in the art would have deviated from the express disclosure of Cecchin, et al., and *why* one would have

modified the express disclosure of Cecchin, et al. to try and arrive at Applicant's currently claimed process and compositions, nor has the Examiner specified why one skilled in the art would have had an expectation of success in modifying the express disclosure of Cecchin, et al. to try and arrive at Applicant's current claimed process and compositions. In fact, the Examiner's only assertion why one would have modified Cecchin, et al. would be "with an eye towards end-use".

However, Applicant respectfully believes such a statement connotes the Examiner is not using the proper analysis for determining a *prima facie* case of obviousness. In fact, Applicant respectfully believes the Examiner's statement that one would have modified Cecchin, et al. to try and arrive at Applicant's currently claimed process and compositions due to "an eye for end-use" presupposes one would have known of Applicant's currently claimed process and compositions, and the benefits thereof, beforehand. However, this is the antithesis of obviousness, and is clearly based on hindsight. The Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown, and just before it was made. Additionally, impermissible hindsight must be avoided, and the legal conclusion of a *prima facie* case of obviousness must be reached on the basis of the facts gleaned from the prior art. See MPEP §2142.

Accordingly, for these reasons alone, Applicant respectfully believes the current rejection should be withdrawn.

Notwithstanding, Applicant respectfully believes Cecchin, et al. fails to disclose, teach, or suggest Applicant's currently claimed process comprising, in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an **ethylene polymer comprising at least 90% by weight of ethylene**, wherein the amount of the **ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight** and the **propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min.** in accordance with ISO 1133 at 230°C and 2.16 kg.

In fact Cecchin, et al. discloses on page 1, lines 28-30 as component B), 5%-40%, preferably 10%-30%, more preferably 12%-30%, of a copolymer of ethylene with, most preferably from 15% to 25% of one or more C<sub>4</sub>-C<sub>10</sub>  $\alpha$ -olefin(s). Accordingly, if the ethylene copolymer component B) of Cecchin, et al. comprises 15% to 25% of one or more C<sub>4</sub>-C<sub>10</sub>  $\alpha$ -olefin(s), then the resultant ethylene copolymer can only comprise at most 85% of ethylene, whereas Applicant is currently claiming at least 90% by weight of ethylene.

Additionally, Applicant respectfully believes Cecchin, et al. fails to disclose, teach, or suggest Applicant's currently claimed process for preparing Applicant's currently claimed propylene polymer compositions, wherein the amount of the ethylene polymer in the resultant propylene polymer composition ranges from 10 to 50% by weight.

As outlined *supra*, for the Examiner to establish a *prima facie*

case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

However, Applicant respectfully believes the Examiner has not outlined *where* Cecchin, et al. discloses, teaches, or suggests Applicant's currently claimed process comprising, in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an **ethylene polymer comprising at least 90% by weight of ethylene**, wherein the amount of the **ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight** and the **propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min.** in accordance with ISO 1133 at 230°C and 2.16 kg, or *why* one skilled in the art would have deviated from the express disclosure of Cecchin, et al., and would have modified the express disclosure of Cecchin, et al. to arrive at Applicant's currently claimed process for preparing Applicant's currently claimed propylene polymer compositions. This, however, is the Examiner's initial burden in establishing a *prima facie* case of obviousness.

See MPEP §2142.

In light of the above, Applicant respectfully requests the current rejection to be withdrawn.

**5. Rejection of Claims 1-6 and 10-12 Under 35 U.S.C. §103(a)**

The Office Action states,

Claims 1-6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schweier et al (US 4,454,299), newly cited.

The patent to Schweier et al teaches the manufacture of a polypropylene/polyethylene blend produced in multiple polymerization zones that may be connected in series. Note Example 1 at columns 4 and 5. The first stage polypropylene may be a homopolymer (claim 3), and the steps may be performed in the gas phase (claim 4). Note the Examples for the variation of temperature and pressure (claim 5). A skilled artisan knows how to vary temperature, pressure and residence times in polymerization chambers to achieve desired results, e.g. brevity of residence time, etc.. It is assumed that a polymer composition having a high impact strength would be suitable for molding operations.

The reference fails to show the specific MFR of the first stage homopolymer polypropylene. The ranges for the composition, per se, are shown in Example 1, 15 g/10 minutes, is embraced by that recited herein. As such, the skilled artisan would have a high level of expectation of success following the teachings of the reference.

**RESPONSE**

Applicant respectfully traverses the rejection of claims 1-6 and 10-12.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under



§103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

With respect to the current rejection, Applicant respectfully believes U.S. Patent 4,454,299 (herein referred to as "Schweier, et al.") fails to disclose, teach, or suggest, "A process for preparing propylene polymer compositions in an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, comprising at least 85% by weight of propylene, is prepared by polymerization, and in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are

polymerized to give an ethylene polymer comprising at least 90% by weight of ethylene,

wherein the amount of the ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg."

Additionally, Applicant respectfully believes Schweier, et al. fails to disclose, teach, or suggest, "A propylene polymer composition obtained by an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, comprising at least 85% by weight of propylene, is prepared by polymerization, and

in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an ethylene polymer comprising at least 90% by weight of ethylene,

wherein the amount of the ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg."

In particular, as with Cecchin, et al., Applicant respectfully believes Schweier, et al. fails to disclose, teach, or suggest Applicant's currently claimed process for preparing Applicant's currently claimed propylene polymer compositions in an at least two-

stage process, wherein,

in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, containing at least 85% by weight of propylene, is prepared by polymerization, and  
in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an **ethylene polymer comprising at least 90% by weight of ethylene,**

wherein the amount of the **ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight** and the **propylene polymer composition has a melt flow rate, MFR, from 2 to 50 g/10 min.** in accordance with ISO 1133 at 230°C and 2.16 kg.

In fact, Schweier, et al. discloses in col. 2, lines 44-52,

. . . (b) in the second polymerization zone, the reaction is carried out under a total pressure of from 7 to 20, preferably from 10 to 16, bar and at from 45° to 60°C., preferably from 50° to 55°C., with the provisos that (i) **the ratio of the partial pressure of propylene to that of ethylene is from 100:10 to 100:60, preferably from 100:20 to 100:50,** and (ii) the ratio of the partial pressure of propylene to that of hydrogen (P/H-II) is from 100:2 to 100:70, preferably from 100:5 to 100:50. . . . (Emphasis added)

Accordingly, Applicant respectfully believes Schweier, et al. fails to disclose, teach, or suggest Applicant's currently claimed process comprising a second polymerization stage in which ethylene, and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-

1-alkenes, are polymerized to give an **ethylene polymer comprising at least 90% by weight of ethylene**, or Applicant's currently claimed compositions produced by the process.

Additionally, Applicant respectfully believes Schweier, et al. fails to disclose, teach, or suggest Applicant's currently claimed process for preparing Applicant's currently claimed propylene polymer compositions, wherein the amount of the ethylene polymer in the resultant propylene polymer composition ranges from 10 to 50% by weight.

As outlined *supra*, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142. Accordingly, since none of the above requirements have been satisfied, Applicant respectfully believes the rejection should be withdrawn.

Further, Applicant respectfully responds as follows with respect to the Examiner's assertion on page 6, line 14-17,

The reference fails to show the specific MFR of the first stage homopolymer polypropylene. The ranges for the composition, per se, are shown in Example 1, 15 g/10 minutes, is embraced by that recited herein. As such, the skilled artisan would have a high level of

expectation of success following the teachings of the reference.

However, as outlined *supra*, Applicant respectfully believes Schweier, et al. fails to disclose, teach, or suggest Applicant's currently claimed process for preparing Applicant's currently claimed propylene polymer compositions in an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, containing at least 85% by weight of propylene, is prepared by polymerization, and

in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an **ethylene polymer comprising at least**

**90% by weight of ethylene,**

wherein the amount of the **ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight** and the **propylene polymer composition has a melt flow rate, MFR, from 2 to 50 g/10 min.** in accordance with ISO 1133 at 230°C and 2.16 kg.

Accordingly, given Applicant's currently claimed propylene polymer compositions are completely different than those disclosed in Schweier, et al., Applicant respectfully believes there is no nexus between the melt index of the resultant polymer produced from Example 1 in Schweier, et al. and Applicant's currently claimed

propylene polymer compositions, or Applicant's currently claimed process for producing the propylene polymer compositions.

In light of the above, Applicant respectfully requests the current rejection to be withdrawn.

**6. Rejection of Claims 1, 2, 4-6 and 10-12 Under 35 U.S.C. 103(a)**

The Office Action states,

Claims 1, 2, 4-6 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seelert et al (US 2002/0019488), newly cited.

The reference to Seelert et al teaches the manufacture of a polypropylene composition wherein the first stage may be a homopolymer of propylene and the second stage an ethylene/C<sub>4</sub>-C<sub>20</sub>-alk-1-ene, as herein recited. The MFR of the homopolypropylene is "from 0.1 to 100 g/10 min." as in claim 2. Note the Abstract and paragraph [0022]. Further, note paragraphs [0047] to [0051] wherein it is taught the use of the gas phase (claim 4), the polymerization conditions (claim 5) and the concept of claim 6. The reference teaches the manufacture of films, fibers and moldings at paragraph [0201].

The reference fails to show the specific MFR of the polymer blend, yet the range recited is common for this type of polymer blend. Further, any manipulation thereof, which is not shown by the claims, would have been within the skill of an artisan with an eye toward end-use. As such, the skilled artisan would have a high level of expectation of success following the teachings of the reference.

**RESPONSE**

Applicant respectfully traverses the rejection of claims 1, 2, 4-6, and 10-12.

The U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under

§103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4) inquiring as to any objective evidence of non-obviousness.

Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP §2142.

With respect to the current rejection, Applicant respectfully believes U.S. Patent Application Publication 2002/0019488 (herein referred to as "Seelert, et al.") fails to disclose, teach, or suggest, "A process for preparing propylene polymer compositions in an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, comprising at least 85% by weight of propylene, is prepared by polymerization, and  
in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are

polymerized to give an ethylene polymer comprising at least 90% by weight of ethylene,

wherein the amount of the ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg."

Additionally, Applicant respectfully believes Seelert, et al. fails to disclose, teach, or suggest, "A propylene polymer composition obtained by an at least two-stage process, wherein,

in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, comprising at least 85% by weight of propylene, is prepared by polymerization, and

in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an ethylene polymer comprising at least 90% by weight of ethylene,

wherein the amount of the ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight and the propylene polymer composition comprises a melt flow rate, MFR, from 2 to 50 g/10 min. in accordance with ISO 1133 at 230°C and 2.16 kg."

In particular, Applicant respectfully believes Seelert, et al. fails to disclose, teach, or suggest Applicant's currently claimed process for preparing Applicant's currently claimed propylene polymer compositions in an at least two-stage process, wherein,



in a first polymerization stage, a propylene homopolymer or a propylene copolymer comprising propylene and at least one C<sub>2</sub>-C<sub>10</sub>-1-alkene other than propylene, containing at least 85% by weight of propylene, is prepared by polymerization, and in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give an **ethylene polymer comprising at least 90% by weight of ethylene,**

wherein the amount of the **ethylene polymer in the propylene polymer composition ranges from 10 to 50% by weight** and the **propylene polymer composition has a melt flow rate, MFR, from 2 to 50 g/10 min.** in accordance with ISO 1133 at 230°C and 2.16 kg.

First and foremost, Applicant respectfully notes the Examiner acknowledges on page 7, line 9 of the current Office Action,

The reference fails to show the specific MFR of the polymer blend. . . .

The Examiner then tries to bridge this acknowledged gap by stating on page 7, line 9 - page 7, line 10,

. . . yet the range recited is common for this type of polymer blend.

However, as with *Cecchin, et al. supra*, the Examiner has not offered any *objective, factual* evidence to support such a blanket statement (i.e., "the [MFR] range recited is common for this type of polymer blend). Obviousness is a question of law based on

underlying factual inquiries. See MPEP §2141. Accordingly, if the current rejection is maintained, Applicant respectfully requests the Examiner to provide objective, factual evidence supporting the Examiner's aforementioned blanket statement.

Additionally, the Examiner asserts on page 7, line 10 - page 7, line 13, of the current Office Action,

Further, any manipulation thereof, which is not shown by the claims, would have been within the skill of an artisan with an eye towards end-use. As such, the skilled artisan would have a high level of expectation of success following the teachings of the reference.

However, Applicant respectfully believes the Examiner has not enumerated *why* one skilled in the art would have deviated from the express disclosure of Seelert, et al., and *why* one would have modified the express disclosure of Seelert, et al. to try and arrive at Applicant's currently claimed process and compositions, nor has the Examiner specified *why* one skilled in the art would have had an expectation of success in modifying the express disclosure of Seelert, et al. to try and arrive at Applicant's current claimed process and compositions. In fact, the Examiner's only assertion *why* one would have modified Seelert, et al. would be "with an eye towards end-use".

However, as with Cecchin, et al., Applicant respectfully believes such a statement connotes the Examiner is not using the proper analysis for determining a *prima facie* case of obviousness. In fact, Applicant respectfully believes the Examiner's statement

that one would have modified Seelert, et al. to try and arrive at Applicant's currently claimed process and compositions due to "an eye for end-use" presupposes one would have known of Applicant's currently claimed process and compositions, and the benefits thereof, beforehand. However, this is the antithesis of obviousness, and is clearly based on hindsight. The Examiner must step backward in time and into the shoes worn by the hypothetical "person of ordinary skill in the art" when the invention was unknown, and just before it was made. Additionally, impermissible hindsight must be avoided, and the legal conclusion of a *prima facie* case of obviousness must be reached on the basis of the facts gleaned from the prior art. See MPEP §2142.

Accordingly, Applicant respectfully requests the current rejection to be withdrawn.

#### **7. DOUBLE PATENTING**

The Office Action states,

Claims 1-5 and 10-12 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8 of U.S. Patent No. 7,196,140 (Dahn et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because the methods recited in the instant claims and in the patent require the same constituents and are produced in a two-stage process, wherein the first stage may produce a homopolymer of propylene. The reaction conditions are claimed, as well.

**RESPONSE**

Applicant respectfully traverses the rejection of claims 1-5 and 10-12.

In particular, Applicant is currently claiming, in part, directly or indirectly,

. . .in a second polymerization stage, ethylene and at least one comonomer selected from propylene and C<sub>4</sub>-C<sub>10</sub>-1-alkenes are polymerized to give **an ethylene polymer comprising at least 90% by weight of ethylene.** . . .  
(Emphasis added)

However, claims 1-8 in U.S. Patent 7,196,140 (herein referred to as Dahn, et al.) claim, in part, directly or indirectly,

A method for producing a highly flowable propylene block copolymer comprising

50 to 80 wt.-% of a propylene homopolymer, and

20 to 50 wt.-% of a **propylene copolymer,**

**wherein the propylene copolymer comprises from 10 to 70 wt.-% of a C<sub>2</sub>-C<sub>8</sub> 1-alkene other than propylene.** . . .  
(Emphasis added)

Since the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. §103(a) rejection, the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are employed when making an obvious-type double patenting analysis. These factual inquiries are summarized as follows:

- (A) Determine the scope and content of a patent claim relative to a claim in the application at issue;
- (B) Determine the differences between the scope and content of the patent claim as determined in (A) and the claim in the application at issue;
- (C) Determine the level of ordinary skill in the pertinent art; and
- (D) Evaluate any objective indicia of nonobviousness.

The conclusion of obviousness-type double patenting is made in light of these factual determinations.

Additionally, any obviousness-type double patenting rejection should make clear:

- (A) The differences between the inventions defined by the conflicting claims - a claim in the patent compared to a claim in the application; and
- (B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue is anticipated by, or would have been an obvious variation of, the invention defined in a claim in the patent.

Moreover, when considering whether the invention defined in a claim of an application would have been an obvious variation of the invention defined in the claim of a patent, the disclosure of the patent may not be used as prior art. (Emphasis added) *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1279, 23

USPQ2d 1839, 1846 (Fed. Cir. 1992).

Accordingly, Applicant respectfully requests the current rejection to be withdrawn.


**CONCLUSION**

Based upon the above remarks, the presently claimed subject matter is believed to be novel and patentably distinguishable over the references of record. The Examiner is therefore respectfully requested to reconsider and withdraw the currently pending rejection, and allow claims 1-15. Favorable action with an early allowance of the claims pending in this application is earnestly solicited.

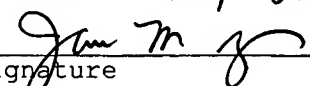
The Examiner is welcomed to telephone the undersigned practitioner if he has any questions or comments.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on

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Signature

November 29, 2007  
Date